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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eliyahou Harari

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EXAMINER

NGUYEN, TAN

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,119

Applicant(s)

HARARI ET AL.

Examiner

Tan T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 63-77 and 90-124 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 63-77 and 90-124 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following action is in response to the amendment filed by Applicants on March 29, 2004.
2. The formal drawings filed by Applicants on March 29, 2004 have been received.
3. Claims 63-86 and 80-124 are pending.
4. Claims 63-77 and 80-124 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant failed to provide an adequate written description for the verifying reference parameters (electrical values) and the reading reference parameters (electrical values) in claims 63-77 and 80-93. Applicant pointed to figure 11c and 11e for the support of the verifying reference parameters and the reading reference parameters. The verifying reference parameters and the reading reference parameters are two different parameters. Figure 11c of Patent disclosed the sense current I_{DS} , which is the sensed current (column 25, lines 16-17), and the reference current I_{REF} (column 26, line 6). There is no support for the relation between the verifying reference parameters (electrical values) and the read reference parameters (electrical values).

Applicant failed to provide an adequate written description for the first, second and third programming reference parameters, and the first, second and third read reference parameters in claims 94-124. It is not clear what the first, second and third programming reference parameters, the first, second and third read reference

parameters in claims 94-124 are. Applicant pointed to 11C of Patent '344 and Figure 15A, 15B, 17B of the present application for support of the programming and read parameters. The programming reference parameters and the read reference parameters are two different parameters. There is no support for the relations between the programming reference parameters and the read reference parameters in claims 94-124.

In claims 94-106, Applicants failed to provide an adequate written for the parameter generating circuitry which generates the first, second, and third programming reference parameters and the first, second and third read reference parameters.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 63-77 and 80-93 are rejected under 35 U.S.C. 102(e) as being anticipated by Banks (U.S. Patent No. 6,014,327).

Claims 63-77 are substantial copies of claims 1, 3-4, 6, 13, 15-17, 19-20 and 29-33 of U.S. Patent No. 6,014,327 to Banks.

7. Claims 80-93 are rejected under 35 U.S.C. 102(e) as being anticipated by Banks (U.S. Patent No. 6,356,486).

Claims 80-93 are substantial copies of claims 1-6 and 13-20, respectively, of U.S. Patent No. 6,356,486 to Banks.

8. Claims 94-106 are rejected under 35 U.S.C. 102(e) as being anticipated by Banks (U.S. Patent No. 6,381,172).

Claims 94-98, 100, 102, 104 and 106 are copies of claims 1, 3-6, 12, 15, 18 and 21 of U.S. Patent No. 6,381,172.

Claims 99, 101, 103 and 195 are substantial copies of claims 7-8, 13-14 and 16-17 of U.S. Patent No. 6,381,172.

9. Claims 197-124 are rejected under 35 U.S.C. 102(e) as being anticipated by Banks (U.S. Patent No. 6,404,675).

Claims 107-109, 111, 113-115, 117, 119-121 are copies of claims 1-3, 6, 9-11, 14, 17-19 and 22, respectively, of U.S. Patent No. 6,404,675 to Banks.

Claims 110, 112, 116, 118, 122 and 124 are substantial copies of claims 4-5, 7-8, 12-13, 15-16, 20-21 and 23-24 of U.S. Patent No. 6,404,675 to Banks.

10. Applicant's arguments filed on March 29, 2004 have been fully considered but they are not persuasive.

Applicant asserted in the Remarks that Figure 11c of U.S. Patent No. 5,095,344 (hereinafter '344) and column 26, lines 51-65 provide support for the verifying reference parameters (electrical values), the read reference parameters (electrical values) and the programming reference parameters. The Examiner disagreed with Applicant's assertion

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because as although disclosed in column 26, lines 51-65 of '344, the reference current I_{REF} ($I=0,1,2$) may be somewhat shifted by a fixed amount during sensing, this shift of the reference current I_{REF} only to place the reference current closer to the midpoint between lower and higher conduction states of the cell being sensed. The reference current I_{REF} are used for sensing the conduction of the cell in both the verifying after programming and reading operation. There is no show or suggestion of separate verifying reference parameters and reading reference parameters, and their ranges in relative to each other as claimed in claims 63-77 and 80-93. For the same reason, there is no show or suggestion of the separate programming reference parameters and reading reference parameters and their ranges in relative to each other as claimed in claims 94-124. Furthermore, Applicant does not have support for the parameter generating circuit as claimed in claims 94-103.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan T. Nguyen whose telephone number is (571) 272-1789. The examiner can normally be reached on Monday to Friday from 07:00 AM to 03:00 PM.

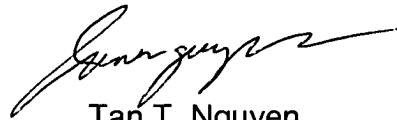
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms, can be reached at (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tan T. Nguyen
Primary Examiner
Art Unit 2818
May 10, 2004